

IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Bart F. Rice  
SERIAL NO.: Rule 53(b) divisional of 08/003,996  
FILING DATE: January 12, 2001  
TITLE: Spread-Spectrum Transceiver  
EXAMINER: Salvatore Cangialosi on parent  
GROUP ART UNIT: 2661 on parent  
ATTY. DKT. NO.: 18721-5695

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Box Patent Application, Commissioner For Patents, Washington, D.C. 20231, on the date shown below:

Dated: \_\_\_\_\_

*Jan. 12, 2001*

By: \_\_\_\_\_

*Edward J. Radlo*

Edward J. Radlo, Reg. No.: 26793

BOX PATENT APPLICATION  
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PRELIMINARY AMENDMENT A

Sir:

Please enter the following amendments to the above-identified application:

IN THE TITLE

Change the title to be --Spread Spectrum Electromagnetic Signals--.

IN THE SPECIFICATION

Add the following paragraph to page 1 line 2:

--Related Applications

This patent application is a Rule 53(b) divisional of U.S. patent application serial no. 08/003,996 filed on January 15, 1993, which application is in turn a divisional application of U.S. patent application 07/766,372 filed September 27, 1991, now issued as U.S. patent 5,210,770. Related patent applications include U.S. patent application 07/907,358 filed July 1, 1992, now issued as U.S. patent 5,267,271; U.S. patent application 08/100,334 filed July 30, 1993, now issued as U.S. patent 5,452,328; U.S. patent application 08/456,077 filed May 31, 1995, now issued as U.S. patent 5,815,526; and U.S. patent application 09/113,410 filed July 10, 1998, now issued as U.S. patent 5,991,333--.

On page 1, line 29: After ",", (first occurrence) insert a space.

On page 3, line 21: Change "619" to --119--; change "621" to --121--.

On page 4, line 5: Change "Cross-Correlation" to  
--Crosscorrelation--.

On page 4, line 6: Change "M.B. Pursley" to --D.V. Sarwate--; change "D.V. Sarwate" to --M.B. Pursley--; after "Vol. 68," insert --No. 5,--.

On page 5, line 20: After "Spectrum," insert --Vol. 27, No. 6,--.

On page 12, line 32: After "transmitted" change the "." to a space.

On page 12, line 33: After "transmitted" change the "." to a space.

On page 14, line 8: After "from" insert --a specified--.

On page 16, line 19: Delete "or the other"; delete "two".

On page 16, line 28: After "of" insert --the--; change "sequences" to --sequence--.

On page 17, line 19: change "North Holland" to --North-Holland--.

On page 18, line 26: After "sequences" change the "." to a space.

On page 22, line 27: Change "insure" to --ensure--.

On page 27, line 4: In Table II, in the fourth line of the heading for the sixth column, delete "BPSK".

On page 29, line 2: In Table III, in the fourth line of the heading for the sixth column, delete "BPSK".

On page 31, line 2: In Table IV, in the fourth line of the heading for the sixth column, delete "BPSK".

On page 33, line 2: In Table V, in the fourth line of the heading for the sixth column, delete "BPSK".

On page 34, line 28: After "spread-spectrum" change the "." to a space.

### IN THE CLAIMS

Please cancel claim 1, and add new claims 2-4 as follows.

1. (canceled)

2. (new) An assembly of simultaneously transmitted electromagnetic signals, said signals being related to each other in said assembly so as to communicate stored information to a receiver, said signals being generated by modulating selected subsets of a set of shift-register-stored binary spreading-code sequences onto a sinusoidal carrier, at least one subset of said set of binary spreading-code sequences containing more than one of said binary spreading-code sequences, each subset of said set of binary spreading-code sequences embodying a corresponding portion of said information.

3. (new) An assembly of simultaneously transmitted electromagnetic signals, said signals being related to each other in said assembly so as to communicate stored information within a transmitting node to a receiving node of a communication network, said assembly of signals being produced by a process of:

a) assigning blocks of bits embodying said stored information to corresponding subsets of a set of shift-register-stored binary spreading-code sequences, at least one of said subsets of said set of binary spreading-

code sequences containing more than one of said binary spreading-code sequences; and

b) simultaneously transmitting selected subsets of said set of stored binary spreading-code sequences from said transmitting node to said receiving node.

4. (new) An assembly of electromagnetic signals, said signals being related to each other in said assembly so as to communicate stored information within a transmitting node to a receiving node of a communication network, said assembly of signals being produced by a process of:

a) generating a set of binary spreading-code sequences by combining contents stored within specified stages of a first binary shift register with contents stored within specified stages of a second binary shift register, said set of binary spreading-code sequences containing more than one binary spreading-code sequence;

b) assigning blocks of bits embodying said stored information to corresponding subsets of said set of binary spreading-code sequences, each of said subsets of said set of binary spreading-code sequences containing at least one of said binary spreading-code sequences; and

c) transmitting selected subsets of said set of binary spreading-code sequences from said transmitting node to said receiving node.

#### IN THE ABSTRACT

Please add the following abstract of the disclosure. As preferred by the USPTO, the abstract is being presented on a separate page.

## ABSTRACT OF THE DISCLOSURE

An assembly of simultaneously transmitted electrically generated signals, which contains a subset of binary spreading-code sequences that are members of a larger set of binary spreading-code sequences available to a particular node of a multi-node communication network. All sequences in the set of spreading-code sequences available to the particular node of the network can be generated by the same configuration of two linear-feedback binary shift registers, where feedback taps of the two linear-feedback binary shift registers correspond to primitive polynomials of the same degree over  $GF(2)$ , the field of two elements.

### REMARKS

The purpose of this Preliminary Amendment A is to re-introduce claims 2 through 4, which Applicant attempted to prosecute in conjunction with the parent patent application. The Examiner of said parent patent application, in his Advisory Action mailed October 24, 2000, refused to enter these claims (which at that time were denominated as claims 52-54) in said parent patent application. Support for all three of these new claims is found in the grandparent patent application as originally filed. Consideration of this new application, and allowance of all claims herein, claims 2-4, are hereby respectfully requested.

A copy of the grandparent patent application, upon which priority is based, including specification, drawings, declaration, and one claim, is enclosed. The undersigned, who is registered to practice before the United States Patent and Trademark Office, hereby avers that said copy is a true copy of said grandparent patent application as originally filed on September 27, 1991.

The drawings originally submitted with the grandparent patent application were accepted in the parent patent application as being formal drawings. Therefore, new drawings are not being submitted herein.

The title is being amended to more accurately describe the invention as claimed.

The specification is being amended, and the abstract added, to indicate the priority chain as required by 35 U.S.C. §120; to give additional information concerning

related patent applications; and to re-introduce those amendments that were made in conjunction with the prosecution of the parent patent application.

Applicant believes that this application is now in condition for allowance of all claims herein, claims 2-4, and therefore an early Notice of Allowance is respectfully requested. If the Examiner disagrees or believes that for any other reason, direct contact with Applicant's attorney would help advance the prosecution of this case to finality, he is invited to telephone the undersigned at the telephone number given below.

Respectfully submitted,

date of signature:

Jan. 12, 2001



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cc: J. Morrissey (w. encl.) (P-03-817D3D1)  
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